Amendment and Response to Office Action
Application No. 10/678,977

Page 2 of 12
Atty. Docket No. 10030.000210 (GCI-002)

Amendments to the Claims

Please amend claims to be as follows.

1. (currently amended) A method of fault recovery by a switch in a local area network, the method comprising:

    detecting a link failure at a port of the switch; and

    clearing <u>all medium access control (MAC) address entries from</u> a MAC address table of the switch in response to the link failure detection.

2. (currently amended) The method of claim 1, wherein clearing <u>all MAC address entries from</u> the <u>MAC</u> address table causes a discovery process to fill the table to begin immediately.

3. (original) The method of claim 1, further comprising:

    momentarily dropping a link on another port of the switch.

4. (original) The method of claim 3, wherein momentarily dropping the link on the other port causes propagation of the link failure to a next switch.

5. (currently amended) The method of claim 1, wherein the <u>MAC</u> address table is cleared <u>of all MAC address entries</u> by overwriting each entry in the table with a template from a register.

6. (currently amended) The method of claim 1, wherein the <u>MAC</u> address table is cleared <u>of all MAC address entries</u> by momentarily turning off power within the switch.

Amendment and Response to Office Action
Application No. 10/678,977

Page 3 of 12
Atty. Docket No. 10030.000210 (GCI-002)

7. (original) The method of claim 3, wherein the link is momentarily dropped for a length of time sufficient for a next switch to detect the link drop.

8. (original) The method of claim 7, wherein the length of time is no more than fifty milliseconds.

9. (original) The method of claim 7, wherein the length of time is under ten milliseconds.

10. (currently amended) A network apparatus comprising:

a <u>medium access control (MAC)</u> address table; and

a plurality of ports wherein at least one port ~~is configured to implement~~ <u>implements</u> a link-loss-learn protocol <u>wherein upon detecting a link failure at the port, the MAC address table is cleared of all MAC address entries therein</u>.

11. (currently amended) The apparatus of claim 10, wherein ~~the link-loss-learn protocol comprises, upon detecting a link failure at the port, flushing the MAC address table so as to immediately begin a discovery process~~ <u>upon clearing all MAC address entries from the MAC address table, a discovery process is begun by the apparatus</u>.

12. (currently amended) The apparatus of claim 11, wherein the link-loss-learn protocol further comprises, upon detecting the link failure at the port, momentarily dropping links on other ports of the apparatus ~~that are configured to~~ <u>which</u> implement the link-loss-learn protocol so as to propagate the link failure.

13. (original) The apparatus of claim 12, wherein the apparatus comprises a multi-port Ethernet switch.

14. (currently amended) A network comprising:

   a plurality of Ethernet switches in a redundant topology,

   wherein at least one switch ~~is configured to implement~~ implements a link-loss-
   learn protocol for rapid fault recovery,

   wherein the link-loss-learn protocol comprises, upon detecting a link failure at a
   port of the switch, clearing a medium access control (MAC) address table
   of all MAC address entries therein.

15. (currently amended) The network of claim 14, wherein ~~the link-loss-learn protocol
   comprises, upon detecting a link failure at a port of the switch, flushing a MAC
   address table of the switch~~ upon clearing all MAC address entries from the MAC
   address table, a discovery process is begun by the switch.

16. (currently amended) The network of claim 15, wherein the link-loss-learn protocol
   further comprises, upon detecting the link failure at the port, momentarily dropping
   links on other ports of the switch that ~~are configured to implement~~ implements the
   link-loss-learn protocol.